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2005

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Massengill, D., Mahlios, M., & Barry, A. (2005). Metaphors and sense of teaching: How these constructs influence novice teachers. *Teaching Education*, 16(3), 213-229.

Published version: <http://dx.doi.org/10.1080/10476210500204887>.

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Metaphors and Sense of Teaching: How These Constructs Influence Novice Teachers

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D. Massengill Shaw, M. Mahlios, and A. Barry

Abstract:

The purpose of this study was to identify the root metaphors of secondary classroom teachers and to observe ways in which these constructs influence teachers' work with their students and their environments. Specifically, five case studies of novice teachers were presented. Results indicated that the metaphor of life as a tree was the most common view and that all five participants held a similar childhood metaphor in which they tended to idealize childhood. Overall, the data showed the persistence of ideas that beginning teachers bring to their university preparation and those beliefs extend into actual classroom practice. Teacher development seemed to be more influenced by the schooling environment rather than the preservice preparation the teachers received. Furthermore, these novice teachers felt conflict between their held-beliefs and the reality of teaching and schooling. Implications for teacher educators and future research are included.

Metaphors and Sense of Teaching: How These Constructs Influence Novice Teachers

While education professors regularly instruct teachers-to-be to learn about and activate (Vacca, 2002) their students' prior knowledge, university faculty do not always practice what they espouse. One of the problems in teacher education, according to Bullough (1991), is that teacher educators ignore preservice teachers' schemata for teaching and treat the novices as though they were blank slates. This is short-sighted since students maintain their schemata for teaching throughout their preservice education programs and into their work as classroom teachers. Research indicates that they accept information and practices that confirm their beliefs and ignore those that contradict them (Zeichner, Tabachnick, & Densmore, 1987). The opportunity to incorporate preservice teacher schemata into university instruction is lost if it is not articulated. In order to achieve greater congruence and impact, we might begin by identifying student schemata which are, indeed, tacit perceptions. One way of helping students articulate these conceptual understandings, experiences, beliefs, attitudes and values that schemata reflect is through the surfacing of teaching metaphors. More specifically, according to O'Callaghan (1997), "teaching metaphors empower the preservice teacher to analyze the ways their personal life histories have impacted their . . . instructional strategies and their problem solving" (p.5). It does indeed make a difference whether a preservice teacher views the school experience as a "family," a "circus," a "prison," or a "factory." Additionally, the broader analysis of metaphors allows preservice teachers to understand how others comprehend and construct their worlds, and through the analysis of changes in one's own metaphor over time, changes in self-understanding can be identified and where desirable – modified. These understandings of self and others are helpful in understanding the process of becoming a teacher (Bullough, Knowles & Crow, 1992).

The purpose of this study was to identify the root metaphors of secondary classroom teachers and to observe the ways in which these constructs influence teachers' work with their students and their environments. Specifically, as researchers we sought to:

1. Describe the similarities and differences among the metaphors preservice secondary content teachers use to describe their sense of teaching.
2. Observe how these metaphors influence teachers' sense of teaching in general and with students in particular.
3. Compare teacher data (from questions 1 and 2 above) from student internship year to the first year of teaching with a focus on changes that occurred in teaching metaphors as a result of changes in subject matter content, student characteristics and environmental context of learning.

Theoretical Framework

The theoretical framework for examining teachers' beliefs was Zeichner and Gore's (1990) theory of teacher socialization. This theory holds that an individual becomes a participating member in the society of teachers through a process that is influenced by pre-training experiences as a pupil, formal pre-service teacher education and in-service years of teaching. Academic analysis alone is insufficient for encouraging personal responses to beliefs; teacher candidates become socialized into the profession during the practice teaching component. Meaning is derived through social interaction between persons and modified through a largely internal process of interpretation. Becoming a professional teacher is an interactive and interpretive process between the meaning making of a novice teacher in relation to the context of his teacher education program and the context of his actual practice. The theory of teacher socialization promotes coherence between thought and action.

Humans use words and images to make meaning of life, school and even sense of self. One framework is the use of metaphor. Metaphor refers to those analogic devices that lie beneath the surface of a person's awareness, and serve as a means for framing and defining experiences (Hardcastle, Yamamoto, Parkay, & Chan, 1985; Yamamoto, Hardcastle, Muehl, & Muehl, 1990). We agree with Lakoff and Johnson (1980) and Hardcastle, Yamamoto, Parkay and Chan (1985) that metaphors are the larger constructs under which people organize their thinking and from which they plan their actions on the multiple environments in which they participate including, to some extent, how they teach and work with students. Metaphors simplify complex phenomena like teachers' beliefs and roles and make them analytically manageable. As Tobin (1990), and those in the Cooperating Teacher Project with whom he works have concluded, "Using metaphors of teaching and learning provides a focus from which to begin looking at [the] teacher change process" (p. 127).

Methodology

A six-part questionnaire entitled "What Was School Like?" (Yamamoto, K., Hardcastle, B., Muehl, S. and Muehl, L., 1990) was administered to 50 secondary education majors enrolled in their senior year at a Midwestern research university during the fall of 1999. All 50 participants were White-European, nearly half were 22 years of age or younger, and 70% were female.

Part 1 of the questionnaire solicits demographic data. Part 2 directs students to recall their elementary and secondary school experiences and to check the listed metaphors that best describe each. Students were also directed to give reasons for their metaphor selection. Part 3 asks students to check their ideal school environment. Part 4 asks students to respond to a series of items that describe themselves using a four-part Likert scale (i.e. strongly agree and so on)

inventory of self-esteem. The scale in part 4 is an adapted short form of the Coopersmith (1967) *Self-Esteem Inventory*. Part 5 asks students to think about life, childhood, and teaching by responding to metaphors of life and childhood, giving reasons for those responses and creating their own personal metaphors for teaching. In Part 6, students self-selected eight adjectives to describe their ideal student, teacher, parent and school administrator.

From the data gathered with the above instrument, one pre-service teacher in each content field in the curriculum (i.e., math, science, English, social studies and foreign language) was selected whose overall metaphor profile conformed to those identified in earlier research on these teachers/content fields (Mahlios & Maxson, 1998). These five were interviewed to provide an overview of their approaches to classroom instruction. Following the initial interviews, classroom observations were conducted during the preservice teachers' internship and first year of full-time teaching (2-3 hours per teacher/classroom) and were focused on such elements as instructional methods employed, overall teaching style, management approaches, communication strategies, use of classroom space and use of and follow-up on planning for instruction. The lessons were also audio taped and transcribed to identify metaphor use in the instruction of selected academic concepts in these classrooms.

During their first full-time year of teaching (the second year of the study), the participants were asked to revisit several of the ideas they provided during their initial interview (student teaching year) as well as the metaphors selected from the questionnaire, "What Was School Like?" (Yamamoto, Hardcastle, Muehl & Muehl, 1990). The teachers were asked to expand on their original answers, make modifications and share their reasoning for any change, if applicable. These follow-up interview sessions also allowed us to confirm earlier ideas supplied by the teachers for consistency and stability of the data.

The analysis focused on relations between the phenomena of schools, children, teaching and curriculum perceived through the metaphorical lenses of five individual teachers, their emerging belief system about these key elements, their relation to the teacher education program goals, and the context of their teaching in two secondary schools. The goal was to better understand how the socialization of the profession impacted their personal interpretation and meaning and how this contributed to the coherence between thought and action.

Data for this study were analyzed using both quantitative and qualitative procedures. Specifically, questionnaire data dealing with the ideal and perceived views of schooling, metaphor selections and adjectives were analyzed using correlation, chi square techniques, cross-tabs, and regression techniques. Interview data were summarized in text form and analyzed using standard case study techniques (Yin, 1984). The data gathered about these five students were focused on the meaning they attached to their views of teaching, schooling, and their students; how the context of their work in a larger school environment interacted with and influenced changes in their images and metaphors of schooling, life, childhood; and ultimately their changing role as a teacher.

Results

The particular analysis to be reported here focuses on relations between the 'metaphorical lenses' of individual teachers, their evolving belief system about these key elements and how such beliefs influence their teaching. A special emphasis is given to reporting on differences between the various subgroups within the sample, and how metaphors relate to teaching students in various academic subject matter areas in the curriculum. Data for this study were analyzed using both quantitative and qualitative procedures.

Metaphors

This section will describe the patterns that exist among the metaphors secondary content teachers use to describe their view of life, childhood and sense of teaching. Personal experience which results from world view, personal/familial/cultural understandings, ethnic and socioeconomic background, geographic location, religious upbringing, and life decisions, play a role in one's beliefs (Richardson, 1996). Thus, we were interested in soliciting the participants' views on life and childhood. Their initial views were expressed prior to their student internship experience. One year later, the participants were asked to revisit their initial ideas.

Student internship. When asked to choose from a list of metaphors, the preservice teachers largely remembered their secondary school experience as being in a team, crowd, family or on a stage (see Table I). The metaphors they selected as being ideal centered on being on a team and being in a family.

The modal response, for the 50 secondary education majors, for the metaphor of life was a tree growing. For all participants (N=50) the first four metaphors of life (trail, river, mountain and tree) accounted for the majority of the responses. Two metaphors of life (tree and trail) accounted for the responses by four case study participants, and the fifth case study participant chose climbing a mountain. One metaphor accounted for 33% of the responses describing childhood (i.e. a flower blossoming) in the total sample (N=50) and this metaphor of childhood accounted for 100% of the five case studies.

In comparing response patterns of the five content groups in the total sample (N=50) there were similarities and differences. In elaborating on their own metaphor of life some saw life as a type of journey in which a person gathers knowledge, some saw life as reaching destiny on top of the mountain, others depicted life as a road with many choices, and yet others saw life

as a blazing trail where the individual determines his/her own destiny. There was considerable variation in the metaphors of life selected by the participants in the several content fields. Trail was the most commonly selected by science students, mountain by English, “other” by social studies, tree by foreign language and trail by the math participants.

First year of teaching. In the post-interview sessions during their first year of teaching, the participants were asked to revisit their original metaphors of life and childhood. The results from this analysis indicated that four participants confirmed their original metaphors of life (tree, mountain, trail) and childhood (flower) and did not change after a year of teaching experience. The only participant who indicated some movement in her belief was Sally (science; tree) who added additional thoughts to her original metaphor of childhood. Sally recognized her views were evolving as she differentiated among students. Although she maintained that childhood was like a flower for some children, other children she identified as a trapped animal and others who were like a wind, free to come and go.

In sum, the five participants in this sample held differing views of life yet a similar childhood metaphor in which they tended to idealize childhood. These views did not differ greatly after one year of teaching.

Sense of Teaching

Prior to the student internship, these case study participants were asked to describe their sense of teaching. The five secondary participants responded with metaphors or words. Like the childhood metaphors these descriptions tended to idealize teaching. Three dominant themes emerged from the interviews conducted with participants representing the four major metaphor groups across the content areas from which the participants were obtained (i.e. math, science, etc.): *teaching as guiding*, *teaching as nurturing*, and *teaching as stimulating* (see Table II).

The five content area participants were also asked to describe their approach to teaching students and several categories emerged that created broad groupings for our observations of their teaching: methodology, motivation, management, evaluation and curriculum. These categories were used to frame the observations of their teaching broadly and their interactions with students in particular. Following, are the five case studies.

John – Social Studies

Student internship (first year of the study). The trail participant, meaning he viewed life as full of choices and obstacles, wrote about teaching as *guiding students*. The major ideas John expressed involved leading students to new knowledge and understanding. The trail participant described children as needing “good ground and care” to fully develop into “what and who they are.” The role of teachers in this perspective is that of the guide to and shaper of the optimal environment in which the natural unfolding of development takes place. Examples of instructional practices identified by the trail participant which he believed best accomplish the above goals for schooling include: cooperative teaming; “leading and guiding” students to teacher held knowledge, communicating expectations clearly, showing students how to apply curriculum to “life issues,” student directed research that promotes students’ cognitive development and teaching as facilitation.

The observations during John’s student internship experience showed support for John’s espoused ideas. Cooperative teaming was evident in John’s jeopardy game review in which the females and males formed teams. John exemplified his ability to lead and guide students to new knowledge by his numerous attempts to explain concepts. For example, John explained blitzkrieg as “the real translation is ‘lightning war.’ Basically, what happened was Germany masked all their stuff on the border. . .and they rushed into Poland.” Then he related blitzkrieg to

life by expanding, “If you have heard the term blitz in football, you basically line up all your guys and go after the quarterback as fast as you can, that’s blitzkrieg.” John always started class by discussing current events, another way to relate social studies to everyday life. John also assigned a research project and provided written feedback on the student’ first attempts at their opening paragraphs.

First year of teaching (second year of the study). When John spoke of his teaching, he identified methodology, student motivation and classroom management as issues. During a review of the students’ previous night’s homework (textbook chapter questions on World War I), John asked the three students who had not completed the homework to go to the hallway. After grading the homework, students were given a diary excerpt to silently read, knowing they would have questions to answer at the completion of the reading. Students discussed the answers to the questions and vocabulary before the class dismisses. Little effort was observed to involve all the students or make modifications in John’s instruction to accommodate the differentiated needs of students.

When asked about his sense of teaching, John continued to affirm his original teaching views, namely that teaming is a way to help guide students and give them the tools to reach their potential. However, he realized how difficult this challenge can be to attain. Furthermore, John verbalized that he did more direct instruction than he would have preferred. The reasoning for more lecturing was due to the restrictions of time and planning. John said there were so many extra duties and concerns that came with teaching that he found it easier to take greater control of the class by lecturing.

John also mentioned that he learned the importance of being a role model for his students and how respect plays such a vital role in teacher-student interactions. When interacting with

students, John emphasized his attempts to maintain their integrity and to listen to what they have to say.

Sally - Science

Student internship. Sally viewed teaching as a tree growing. Like her students she realized she too was just learning to teach and she hoped to expand her experience, develop greater confidence and become “bigger with stronger roots.” She also described *teaching as nurturing*; it was important for her to provide an environment conducive for student growth. While the ‘organic’ notion of growth and development is clearly woven into her views of teaching, curriculum and student learning, she appeared to take a more instrumental role in making sure students’ development occurs through an active stance as a teacher, compared to a less active role taken by the trail respondent (John) who felt he needed to guide students to new knowledge.

Sally believed her main teaching approach would be based on inquiry methodologies and the students would be actively involved in thinking and discovering scientific knowledge. Furthermore, her view of discipline was that she should be a facilitator “. . .who helps facilitate them with their classroom learning. I just want them to be thinking more on their own. That’s not relying on someone else to do the thinking. That’s one of the more critical things I think. . .Discipline isn’t the most important concern unless it overtakes the learning environment and they can’t learn in that environment.”

Classroom observations showed Sally’s focus on active learning, primarily through science labs. During labwork, Sally circulated around the room giving help as students needed assistance. She spent considerable time asking students questions and clarifying concepts and terminology that would familiarize the students with the material they needed to learn. For

example during a lab on the heart, she said, “Right here is the aorta, right there. That tube went out and connected to this tube. That was pumping it (blood) out. What is this right here?”

During one observation, it was noted that Sally used numerous analogies to help her students learn concepts. For example, she stated that “. . .the ‘leech looking thing’ was the spleen, the kidneys can be remembered by thinking of the shape of kidney beans, and the trachea is rigid just like olden-day washboards.”

First year of teaching. One challenge Sally faced during her teaching was to keep the students engaged. Sally spoke of motivation, management and curriculum as key issues in working with students. During observation, students spent some of the lengthy block-schedule class period in lab, which increased opportunities for interaction between students and Sally. However, the interactions focused mainly on management rather than motivating students or adapting curriculum to best meet their needs. For example, Sally asked one student to “. . .leave the overhead projector alone (he was playing with it), stop fooling around with a pincushion-like item and do his job, and to get out of the teacher’s zone.” While interacting with another student, she directed him to return to his workspace and during the lab she asked if he “. . .had completed any of his project.” Even though Sally felt motivation and adapting curriculum are important, there was little evidence of these qualities in her teaching and these interactions illustrate a discrepancy between ideal and real in her work with some of her students.

During Sally’s first year of teaching, she emphasized the challenges of student involvement. In her original interview (internship year), Sally promoted inquiry learning and after some teaching experience, she said, “Inquiry is easier said than done. I’ve done a lot of lecturing.” She has also realized that science texts are difficult for students to understand and she attempts to assist them by teaching vocabulary and using concept mapping while reading.

When asked about her viewpoint on the original metaphors she selected, Sally said she felt her teacher roots were definitely starting to grow because “. . .being on your own for the first time, you really learn.” Sally said she learned a lot about the students and how they act. Sometimes she was way ahead of them and other times just a step ahead. Sally’s focus was on establishing those roots and building a conceptual and technical base during her first year of teaching. In a very metaphorical sense, she said that she was hoping flowers and leaves would soon appear in her classroom teaching.

Jenny – Math

Student internship. Jenny, a tree participant (i.e. life is growth), viewed *teaching as stimulating* the learner and believed it was her role to prod and encourage students to acquire knowledge. Jenny paralleled her metaphor of teaching to her view of life: a growing process. She spoke of the give and take involved in the relationship between teacher and student. “I think that it’s one in which we are helping students grow but at the same time we are growing and learning from them.” Prior to teaching, when Jenny was asked how to incorporate instructional methodology to coincide with her metaphorical view, Jenny was uncertain. She knew she wanted to be a nurturing adult but could not clearly define practices that would further support her goal. When asked about teaching students, Jenny emphasized motivation and curriculum as two key elements in working with students.

Observations during her student internship showed Jenny frequently walking students through the steps of solving mathematical problems. Visuals, such as overhead and chalkboard were used to solve problems so students could see the steps of problem-solution as well as hear Jenny verbalize them. Furthermore, Jenny incorporated think-alouds in which she modeled her thinking process for the students. At one time, she attempted to use a simple tune to help

students remember the process of a particular type of mathematical problem. On occasion, some inquisitive students voiced questions which Jenny answered, but the quiet students were mostly uninvolved with her. There was no documentation of interaction with the majority of the students during the lessons observed, which raises questions about her ability to modify curriculum and provide motivational support for various student needs. The overall classroom atmosphere was one in which Jenny covered academic content as efficiently as she possibly could.

First year of teaching. Observation findings during the first year paralleled those in her student internship. Namely, Jenny rapidly and systematically worked through problems by demonstrating solutions. During the interview, Jenny showed stress and frustration from her inner conflict. Jenny said this experience of learning and growing as a teacher had influenced her to change some of her practices. Jenny clearly expressed what appeared to be a fundamental need – to incorporate more active learning, real-life applications and discovery learning along with student acquisition of mathematical knowledge and skills. Again, while this was her desired goal, it was not central in her actual teaching.

Jessica – Foreign Language

Student internship. A tree participant (meaning life as a growing experience), Jessica, felt that she, as a teacher, should *nurture* and love students as a means to help them reach their potential. She could help students grow by being positive, motivated, providing a safe environment, creating a student-centered classroom and being a role model. She idealized the basics of teaching the Spanish language, as well as making it interesting by providing students engaging activities and role-plays. Jessica also described her plans to use numerous supplemental materials to support the text, specifically authentic materials in which students not

only would learn grammar but also about the Spanish culture. Furthermore, Jessica planned to incorporate small group and pair-work into her teaching.

Observations during Jessica's first year of teaching displayed a variety of methodologies. Students were involved in writing Spanish words on the board, working in groups to practice vocabulary, and looking at animal pictures and saying the animal's name in Spanish. The overall classroom atmosphere was positive and safe. Jessica believed that students needed a lot of guidance through management and evaluation. During observations, Jessica provided close-proximity to assist students in their on-task behavior. She also regularly called on multiple students to answer questions and solve problems on the board. If student was unable to accomplish a task independently, Jessica provided scaffolding to assist them (e.g. Jessica broke the assignment into smaller steps and asked the student to begin where he was knowledgeable and helped with vocabulary words that were difficult). In addition, a portion of the lesson involved the entire class answering questions aloud, which allowed struggling students to successfully participate while not being singled out.

First year of teaching. After some experience, Jessica noted that she maintained her original sense of teaching, namely that teaching should be nurturing and positive for students and should respect the uniqueness of each student. She also commented on the "...light you can see in students' eyes when they are learning and growing." Jessica said she struggled to combine student-centered classes with the need for some direct instruction, especially when the students misbehaved. She described how she felt student collaboration enhanced the learning that occurs in her classroom. Jessica also mentioned that she possessed a deeper understanding of the content subject matter compared to her initial teaching work and most importantly that teaching is a learning experience for teachers as well as students.

Bryan - English

Due to one English participant dropping out of the original study, Bryan was added to the study in year two. The information included in this report will only report on Bryan's student internship experience.

Student internship. The mountain participant (meaning it takes both faith and work in life to reach the top of the mountain) largely saw *teaching as a form of nurturing*. In this context, Bryan saw teaching as a means to develop personal, "family" relationships with students that allows students to feel cared for, supported, loved and inspired, which in turn motivates them to learn. Bryan, like the other case study participants, saw childhood from the metaphorical perspective of a 'flower blossoming,' and stated that "...every kid can learn" as the essential starting place for good teaching. Students, whose relationships with their teachers develop in a loving manner are more likely to work and learn for those teachers, according to Bryan. His main emphasis when discussing the needs of students was first and foremost to provide greater motivation by "...healing their past hurt, promoting a healthier self-concept and developing trust in the teacher." This should be done, he believed, before emphasizing academic content. Bryan's overarching ideal that directs his teaching is to build positive, caring relationships with students.

The observations during Bryan's student internship experience revealed considerable creativity and student involvement. The classroom environment was positive, supportive and safe. For example, when the students went to the front of the room to share their poems with their classmates, Bryan always acknowledged each student with a positive cheer or differentiated handclap to signify appreciation and uniqueness for each individual. Students analyzed a musical selection, discussed vocabulary, read a poem in think-pair-share fashion, journaled and

focused on interpretation of the poem. All of his students were involved and their ideas and questions were validated.

In sum, it appeared that two of the five internship teachers (Jessica and Bryan) came to their initial teaching with a sense of teaching as nurturing or guiding students and created ways for students to meet their goals (e.g. social relationships). Their ideas were implemented in their teaching in a generally successful manner. It appears for the remaining three participants that the new teachers experienced some discrepancies and perhaps conflict between their beliefs and the realities of the classroom teaching environment. They struggled in their ability to manage, motivate and adapt curriculum to meet student needs. It does appear that these new teachers felt generally comfortable in their content knowledge (i.e. social studies, science) and were trying to relate that knowledge to their limited pedagogical knowledge, with regard to strategies and management.

Discussion

This study represents an initial, albeit incomplete, inquiry into teachers' beliefs about teaching and the schooling experiences and how metaphors guide teaching and learning with students. Results offer educators some ideas about the types of beliefs secondary teachers bring with them to classrooms, the emergence and evolution of those beliefs and their relation to ways in which teacher educators may influence their development in teacher preparation programs and actual classroom settings. The study also provided some important data on similarities and differences in beliefs of teachers in the varying content areas of secondary schools and how their instruction is influenced by the metaphors that frame their pedagogical beliefs.

In conclusion, it appeared that the metaphor of life as a tree was the most common (N=3) view of these five teachers. All five participants saw childhood as a flower blossoming,

indicating the need for nurturing, care, gentleness and innocence when interacting with children. These teachers felt it was their responsibility to create growth-promoting environments for their students. This conceptualization of growth was also reflected in their sense of teaching. While these first-year teachers expressed uniqueness in their sense of teaching, their words reflected a newfound awareness of the dynamics and challenges of teaching, which they were beginning to perceive as a growing, learning experience. Furthermore, their metaphor of life, childhood and sense of teaching did not change over the two-year time period of this study.

In light of the teacher socialization theory (Zeichner & Gore, 1990), the practice of teaching encourages personal responses to beliefs. Meaning is formed through interaction with students and private reflection of one's practices. The analyses of the five case studies revealed the conflict that novice teachers experience and their interpretation of their work with students. Several key issues emerged and are described as role of school environment, interaction with students, management, pre-existing beliefs, teacher development and professional growth.

As evidenced by these novice teachers, the school environment plays a role in affirming or contradicting teacher beliefs. The student population is a key part of the school environment. Other contextual factors such as teacher collaboration, egalitarianism, teacher leadership, feedback systems and the integration of work and learning (Smylie, 1995) may influence the organizational context in which beliefs are confirmed or modified. Even though the alignment between beliefs and practices is a highly individual negotiated process, it is affected by the organizational environment (Tabachnick, & Zeichner, 2003).

When analyzing the interactions between the five teachers and their students, it appears that the novice teachers' practices remain largely the same for all students, regardless of student needs. Slavin and Madden (1989) identified the principle to assess student progress and adapt

instruction to meet individual needs. This principle is further supported by researchers who found adaptations to curricula benefit struggling students (Sawyer, 1999; Watts, 2000). Yet in this particular study, it seems that such recommendations for differentiated teaching and curriculum was not heeded by our beginning teachers. This could be due, in part, to the complexity of teaching that novice teachers experience in their first-year.

Management issues are often a concern for teachers, especially novice teachers as exemplified by three of the five participants in this study. One reason for management challenges may be due to the fact that the teachers do not know the student population. This is illustrated by Kerrie, who was a successful teacher in her first school. After moving to a new school, Kerrie felt confronted by the 'dramatically different' students (Bullough & Baughman, 1997, p. 92) so she had to adapt to their behaviors. Several studies have documented that when teachers shift and change their management metaphor positive results occur in their relationship and work with students (Bullough & Baughman, 1997; Tobin, 1990).

Overall, it appeared that beginning teachers have ideas about their sense of teaching and specific ways to portray that image in their teaching. The pre-service teachers in this teacher preparation program were not trained to systematically tap into their metaphors or examine them in relation to the program's content or recommended practices. Even though there was no inherent conflict between student beliefs and program conceptualization, the data of this study indicate the persistence of ideas (i.e. metaphor and overall sense of teaching) that teachers-to-be bring to their university preparation and that those beliefs extend into actual classroom practice and remain similar after one year of classroom teaching.

Bullough (1991) states that professors often do not activate students' metaphorical schemata. However, it is important for university professors to connect with preservice teachers'

images and use this as a starting point for greater understanding and as a gauge to measure development (Thornbury, 1991). Additionally, helping preservice teachers develop greater self-understanding will enhance their ability to acquire new knowledge (Stephich & Newby, 1988; Williams, 1988). Furthermore, Mahlios and Maxson (1998) note that a mismatch of metaphors between preservice teachers and faculty about children, schooling, et cetera may hinder attaining program goals in teacher education preparation experiences. Conceptualizing complex roles and responsibilities so preservice teachers' beliefs, knowledge and practices are not ill-conceived may reduce the discrepancy beginning teachers often face.

The teacher development aspect of the five case studies appears to be more influenced by the interaction of the schooling environment with the teachers' various metaphors than the preservice preparation these teachers received. This supports many teachers' reports that learning to teach, especially in the early years, is more of an on-the-job phenomenon than an intellectual one acquired at the university.

Professional growth may have its roots in the resolution of conflict between held-beliefs and the reality of teaching and schooling. When the opportunity comes for novice teachers to implement their metaphorical beliefs and sense of teaching in their classroom, they are often faced with unforeseen challenges, which result in dissonance between the ideal and real. These discrepancies are not unanticipated and have been noted by other researchers (e.g., Argyris & Schon, 1974).

As Thornbury (1991) has indicated, metaphors are one of the most powerful forces for change. A metaphor simplifies beliefs and makes them manageable (Tobin, 1990). Metaphors can be a tool to enable teachers to reflect, analyze, evaluate and restructure their practice (Zuzovsky, 1994). Finally, they can help educators better understand these discrepancies that

beginning teachers face. Providing preservice teachers with greater understanding and awareness helps narrow the gap between the ideal and real, and in turn, may positively influence beginning teacher development and retention.

There is a limitation in the present study that needs to be acknowledged. This study mainly focuses on a small number of participants, specifically five case studies from the larger sample (N=50). Therefore, the results of the five case study participants are not generalizable to the larger population of beginning teachers.

Implications for future research include, but are not restricted to the following. First, there is a need to further investigate the relationship between program conceptualization and student metaphors and their images of teaching and schooling. The situation in this study is fairly prevalent in many teacher preparation programs. It is often assumed that a conflict between student views and program conceptualization does not exist, or that if a conflict does exist then pre-service teachers discount their ideas and adopt those of their preparation program. An important avenue for future research is to further analyze the alignment of student beliefs and program framework, using the students' metaphors as active elements in helping pre-service teachers learn how to teach, as exemplified by the program at the University of Louisville (Price, 2002). A second implication is to explore which category of metaphors is more likely to lead to more effective instruction. Tobin (1990) suggests there are qualitative differences between metaphorical viewpoint and the quality of one's teaching. While this study did not gather data on the relationship between metaphorical view and teaching competence, it does point to needed future inquiry. Third, there is a need for further documentation, through longitudinal studies, to investigate the images teachers hold about their classroom and learning, how the beliefs and images modify and the reasons for such change, if any.

Table I: Frequencies and percentages of root metaphor choices by teachers' academic discipline: Number for each discipline: science = 15, English = 16, social studies = 11; foreign language = 7, math = 6^a.

<i>Metaphor</i>	<i>Discipline</i>				
	Science	English	Social Studies	Foreign Language	Math
<u>School</u>					
Family	5 (33)	7 (44)	4 (36)	2 (29)	1 (16)
Team	6 (41)	7 (44)	3 (28)	2 (29)	3 (52)
Garden	1 (06)	2 (12)	-----	1 (14)	-----
Circus	-----	-----	-----	-----	-----
Prison	-----	-----	-----	-----	-----
Zoo	-----	-----	-----	1 (14)	-----
Stage	-----	-----	-----	-----	1 (16)
Crowd	-----	-----	2 (18)	-----	-----
Factory	-----	-----	1 (09)	-----	-----
Other	3 (20)	-----	1 (09)	1 (14)	1 (16)
<u>Life</u>					
Trail	5 (33)	-----	1 (09)	1 (14)	2 (33)
River	2 (13)	1 (06)	2 (18)	2 (29)	-----
Mountain	2 (13)	4 (25)	2 (18)	-----	-----
Tree	3 (20)	2 (13)	-----	3 (43)	1 (17)
Water	1 (07)	-----	-----	1 (14)	-----
Rainbow	1 (07)	-----	-----	-----	-----
Bird	-----	1 (06)	-----	-----	-----
Ocean	-----	3 (19)	1 (09)	-----	-----
Other	1 (07)	5 (31)	5 (46)	-----	3 (50)
<u>Childhood</u>					
Spring	1 (07)	1 (06)	1 (09)	1 (14)	2 (34)
Animal	1 (07)	-----	-----	-----	-----
Flower	5 (33)	7 (43)	6 (55)	3 (43)	4 (66)
Wind	3 (20)	2 (13)	2 (18)	-----	-----
Cloud	-----	-----	-----	-----	-----
Night	2 (13)	-----	-----	3 (43)	-----
Other	3 (20)	6 (38)	2 (18)	-----	-----

Table II: Relation of life and childhood root metaphors to approaches to teaching.

<u>Content area</u>	<u>Interview/observation themes</u>
Science	

^a These data were previously reported in the volume 24, number 1 issue of the *Action in Teacher Education* journal, spring 2002, pp. 9-21. These data are reported in the current paper to provide the larger context for the case studies reported. Permission of the ATE publishers was obtained for reprinting the data in this manuscript.

Sally

Internship Year: Teaching is a form of nurturing that creates environments that promote student academic growth; inquiry teaching; teaching at-risk students is largely “coping.”

First Year: Teaching is a learning experience; inquiry teaching and student involvement are challenging; teaching at-risk students requires greater motivation and management as well as curriculum adjustments.

Family (ideal school)

Tree (life)

Flower (childhood)

English

Bryan

Internship Year: Teaching requires developing and fostering relationships first and foremost and then through that, enhancing knowledge; teaching at-risk students needs to focus on healing their beliefs and promoting trust through every-day interactions.

First Year: Still in progress

Family (ideal school)

Mountain (life)

Flower (childhood)

Social Studies

John

Internship Year: Teaching requires eagerness and diligence and is the act of ‘unfolding’ students’ talents; teaching is ‘guiding’ students to new knowledge and understandings; teaching at-risk students should be practical, survival oriented, i.e., focused on the here-and-now.

First Year: Teaching is guiding students and giving them tools to reach their potential; teaching is being a role model; teaching at-risk students requires altering instructional and management styles.

Team (ideal school)

Trail (life)

Flower (childhood)

Foreign Language

Jessica

Internship Year: Teaching requires enthusiasm and constancy and is the act of ‘developing’ students’ talents; teaching is nurturing;

teaching at-risk students starts with making them feel important, providing them choices, lived realia, guidance and patience.

First Year: Teaching needs to be nurturing and positive; should be student-centered; teaching at-risk students takes more time (curriculum and management issue); students should be treated individually.

Family (ideal school)
Tree (life)
Flower (childhood)

Math

Jenny

Internship Year: Teaching requires zeal and assiduousness and is the act of 'stimulating' student's talents; teaching is 'prodding and encouraging' students to acquire knowledge and understanding; teaching at-risk students should be focused on fundamentals/basics and on basic human needs first and also 'equity'.

First Year: Teaching is a learning, growing experience; students need more active, discovery, real-life learning; teaching at-risk students involves greater motivation and teaching of the fundamentals.

Family (ideal school)
Tree (life)
Flower (childhood)

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